

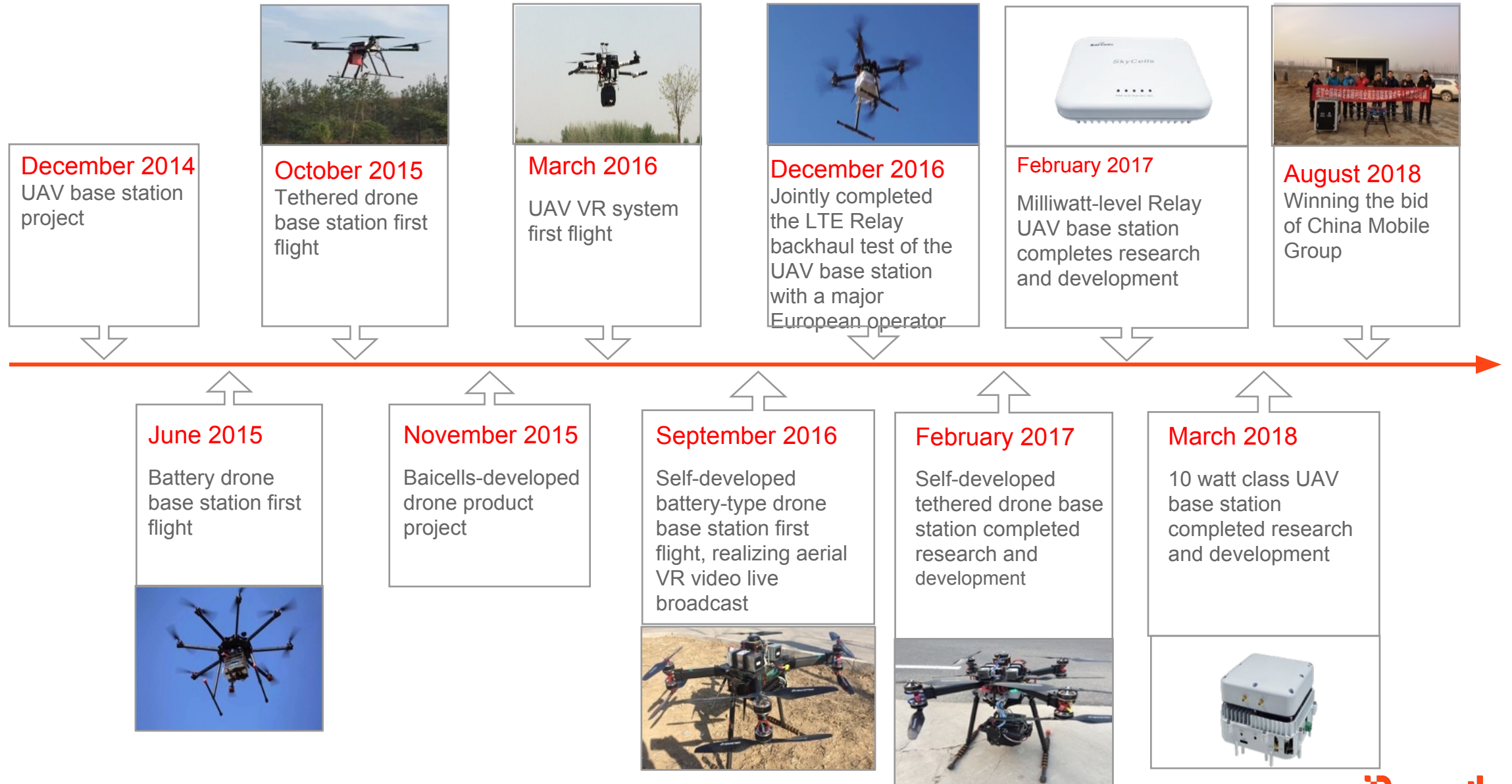


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UAV Innovative Product Introduction ---To DIGI

Bai cells

Baicells' Drone Development History



Product Introduction

SkyCells-T Series --15Kg Level Tethered UAV

Special Feature

high altitude Service ceiling 4000m	High precision Vertical:±0.5m Horizontal: ±1 m	High speed Ascend: 5 m/s Decend: 3m/s
High intelligence Route planning Automatic flight	High interaction One-button takeoff One-button Return-to-Home	Modular Compatible base station Photoelectric load



Self weight
25KG



Operating Voltage
48V DC



Wind resistance
10m/S



Load
15KG



Maximum flight time
160h
<10h (ECO mode)



Dimension
120*120*60 (cm)



Technical Parameters

Body material	Body structure	Symmetrical motor wheelbase	Anti-vibration ability	Maximum flight height	Flight status	Working environment temperature
carbon fiber	Six-axis Six-propellers	1600mm	Pitch roll ±1.5°	100/200m	Real-time display Abnormal alarm Automatic return	-20~40°C



SkyCells-B Series-- 3Kg Load Drone



Self weight
5.5KG



Operating Voltage
24V DC



Dimension
60*60*60 (cm)



Load
3KG



Single continuous flight time
70 minutes (1kg load)
60 minutes (2kg load)
50 minutes (3kg load)



Wind resistance
10m/S

Technical Parameters

Body material	Body structure	Symmetrical motor wheelbase	Anti-vibration ability	Maximum flight height	Flight status	Working environment temperature
carbon fiber	Four-axis four-propellers	1100mm	Pitch roll $\pm 1.5^{\circ}$	1000m	Real-time display Abnormal alarm Automatic return	-20~40°C

Special feature

high altitude Service ceiling 4000m	High precision Vertical: $\pm 0.5\text{m}$ Horizontal: $\pm 1\text{m}$
High intelligence Route planning Automatic flight	Multiple redundancy Propeller redundancy
High speed Ascend: 5 m/s Decend: 3m/s	Modular Compatible base station Photoelectric load
High interaction One-button takeoff One-button Return-to-Home	High integration Easy to implement Rapid deployment

Airborne Base Station

Light weight, small size, easy to adapt to drones; large transmission power, wide coverage



LTE TDD mode

2×10 watt class general purpose airborne base station



Self weight
3.9Kg



Transmit power
2*10W



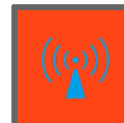
Working frequency
UL/DL:
2555-2655MHz



Operating Voltage
48V DC



Average power
consumption
190W



Return method
Network port,
optical port,
wireless 3G/4G
(optional)



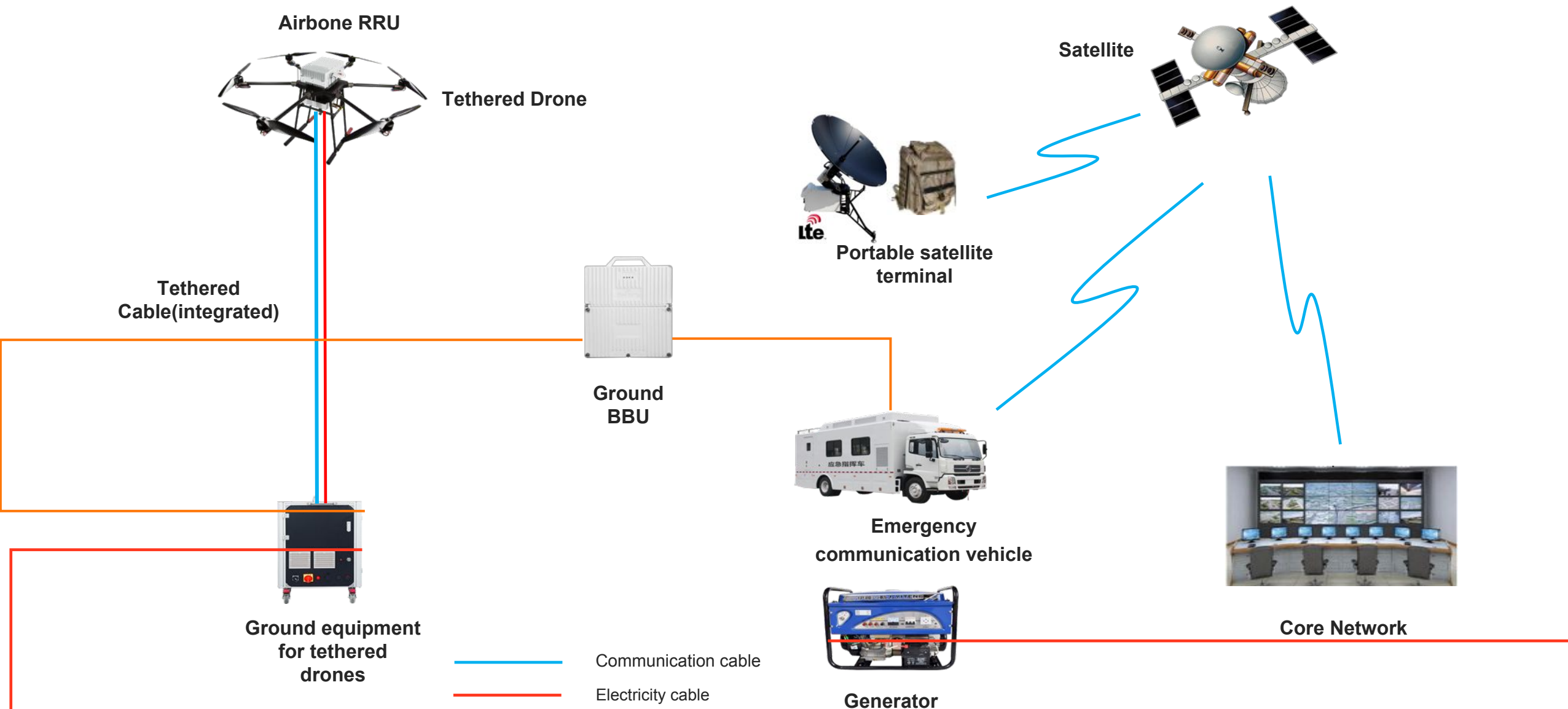
Networking mode
Independent
networking
Return core
network



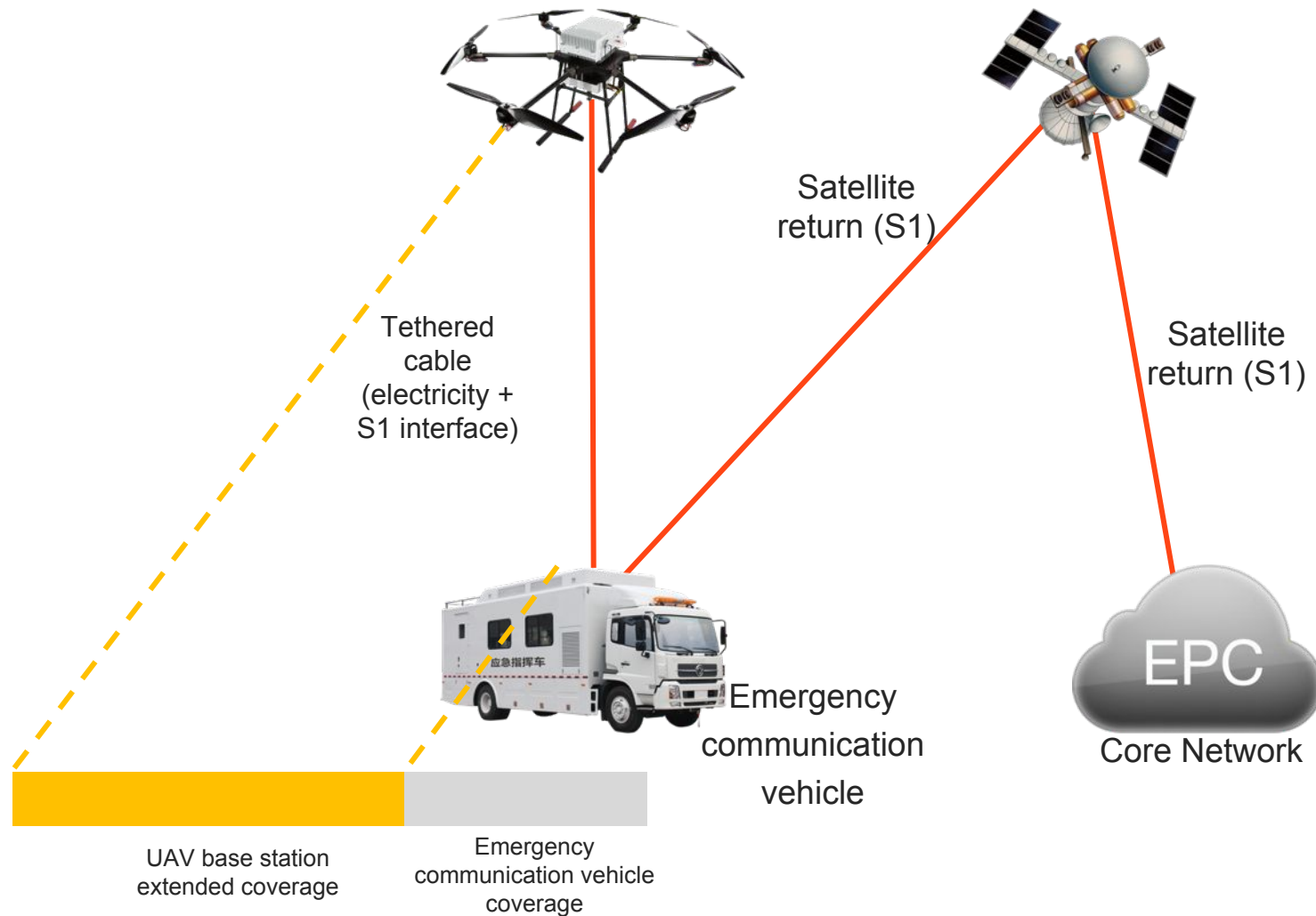
size
18*18*5(cm)

Solution

SkyCells-T series tethered drone emergency communication solution overall system architecture



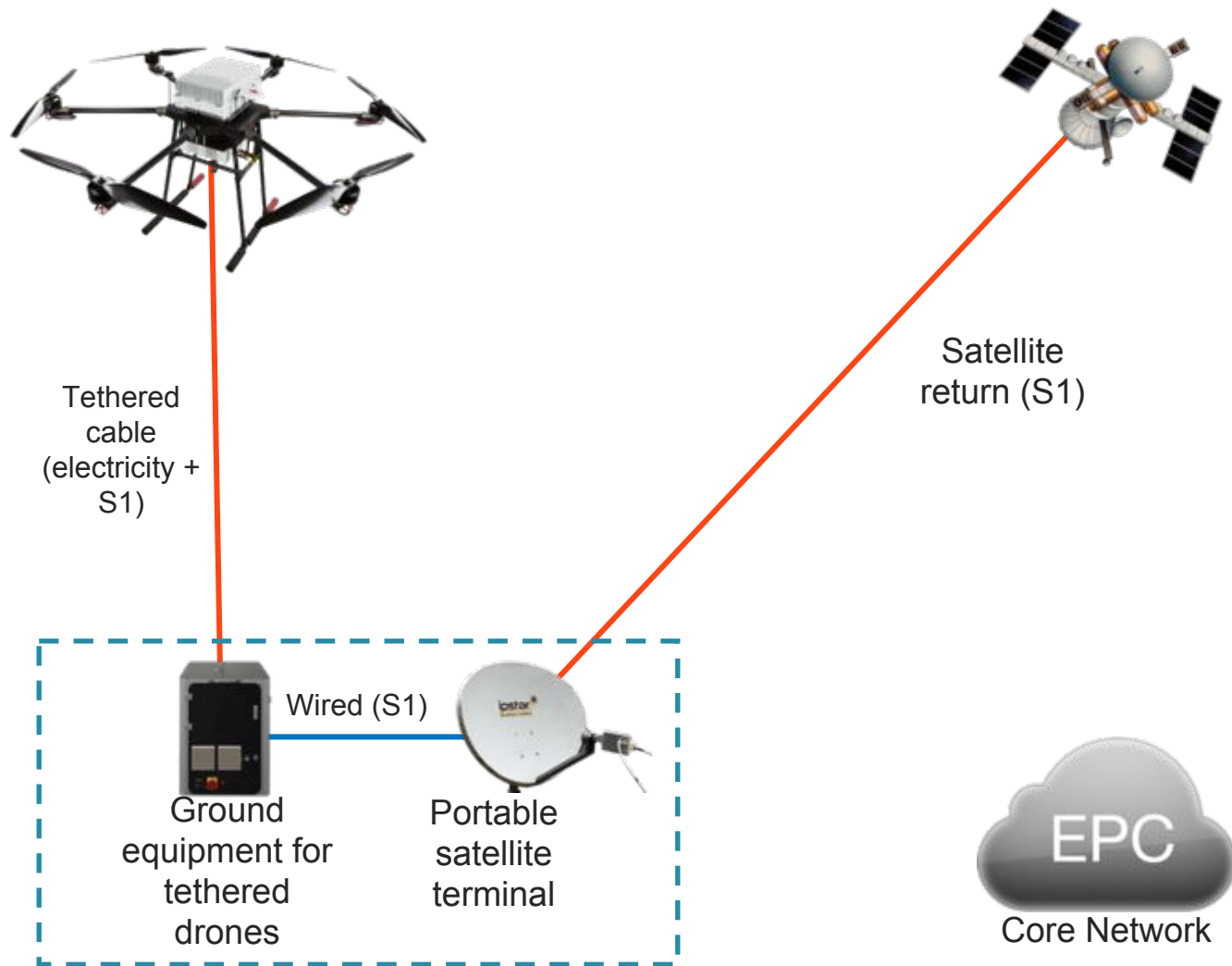
SkyCells-T series of tethered drone base stations cooperate with emergency communication vehicle deployment basic plan



- Emergency communication vehicle supplies power to the tethered drone base station.
- Backhaul remote core network by using emergency communication vehicle satellite backhaul capability.
- The tethered UAV base station S1 interface is connected to the satellite communication module of the emergency communication vehicle via the tethered cable.
- Tethered UAV carrying base station flight expands coverage of emergency communication vehicles.

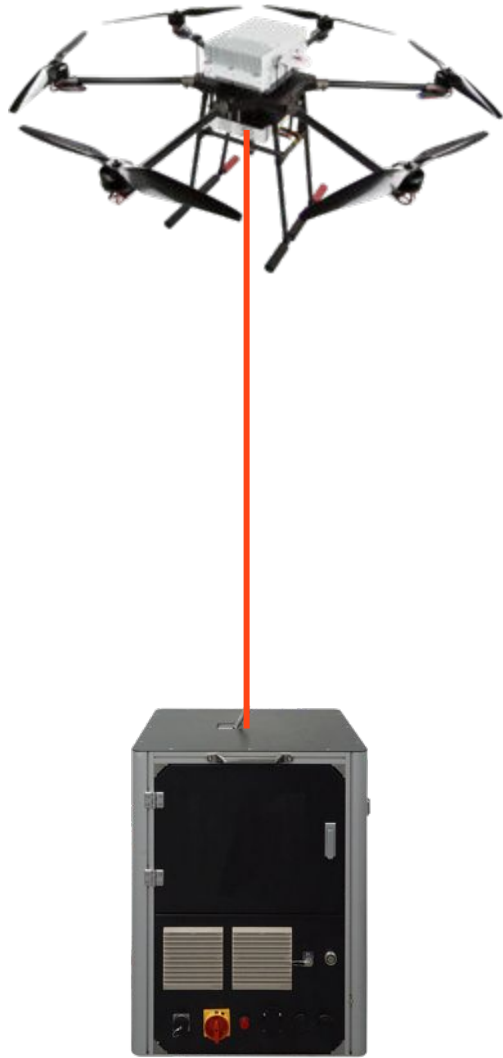
SkyCells-T series of tethered drone base stations with portable satellite terminal deployment

Tethered drone base station



- Backhaul remote core network with portable satellite terminal.
- The power of the tethered drone base station is provided by the ground equipment of the system, which may be a gasoline generator or a battery pack.
- The base station S1 interface above the drone is docked with the portable satellite terminal through the tethered ground device.
- Rapid deployment of tethered drone base stations, tethered ground equipment, and portable satellite terminals by airdropping.

Advantages of a tethered drone base station



Relative to non-tethered

- Overcome the short limit of air retention time (not less than 8 hours)
- Can carry more types and heavier equipment (15kg)
- Better wind resistance and better weather conditions
- It's easier to operate (one-button takeoff)
- Universally adapt to existing power supply systems (AC mains, panels)
- More convenient to communicate with the ground network
- Multiple protections are more secure (ground power + backup battery)

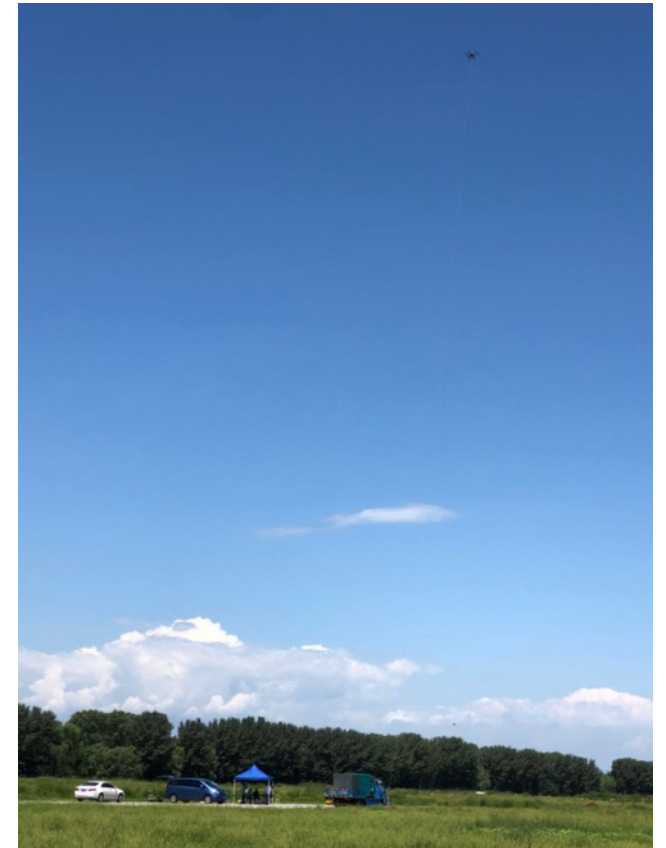
Relative emergency communication vehicle

- Base station deployments are higher (up to 200m) for better coverage through direct-view propagation and lift-off effects
- System deployment is more flexible and simple (quick deployment in ten minutes, small pickup trucks can carry drones)
- Can be carried by light vehicles (the drone moves with the car), even airdrop deployment
- Lower system cost
- System operation is simpler, deployment and recycling is faster

Typical Case

SkyCells-T series – China Mobile High Altitude Base Station Project

As the provider of China Mobile's first phased high altitude UAV base station system, Baicells' drones were equipped with Huawei RRU base stations (12kg) according to customer requirements. They were in flight continuously for 4 hours at a height of 200 meters and 4 hours at a height of 100 meters.



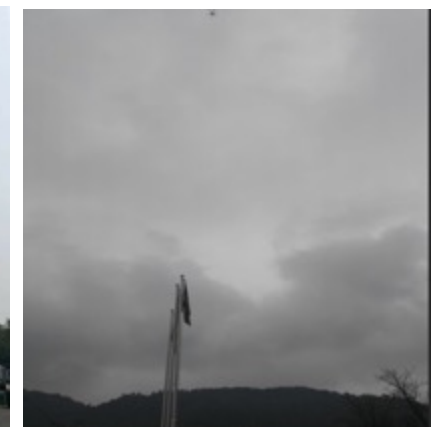
SkyCells-T series UAV Base Station System Acceptance with China Mobile

Location: Sichuan Province / Anhui Province / Shanxi Province / Zhejiang Province

Purpose: Acceptance of the delivery equipment of China Mobile's high-altitude base station project

Objective: mainly test on communication service and the VoLTE voice service function after the base station reaching high altitude.

Result: The acceptance was successfully completed and approved by mobile users in all provinces and cities.



SkyCells-T Series Tethered UAV Emergency Communication System User Acceptance Case

Specialized On-site Support Services:

Baicells can provide customers with professional service and technical training. In order to ensure the rapid recovery of the communication infrastructure, full on-site technical support services are provided during the period of use of UAV.

Application equipment:

Six-blade drone, equipped with emergency communication base station, is fully functional with emergency communication vehicles.

Satellite Vehicle Application Cases:

- In February 2019, customer technical support was provided for the project in Ziyang City, Sichuan Province.
- In April 2019, customer technical support of Qinyuan County Project in Shanxi Province was provided.
- In April 2019, Liangshan County, Sichuan Province, Forest Fire Emergency Communication Project technical services.





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